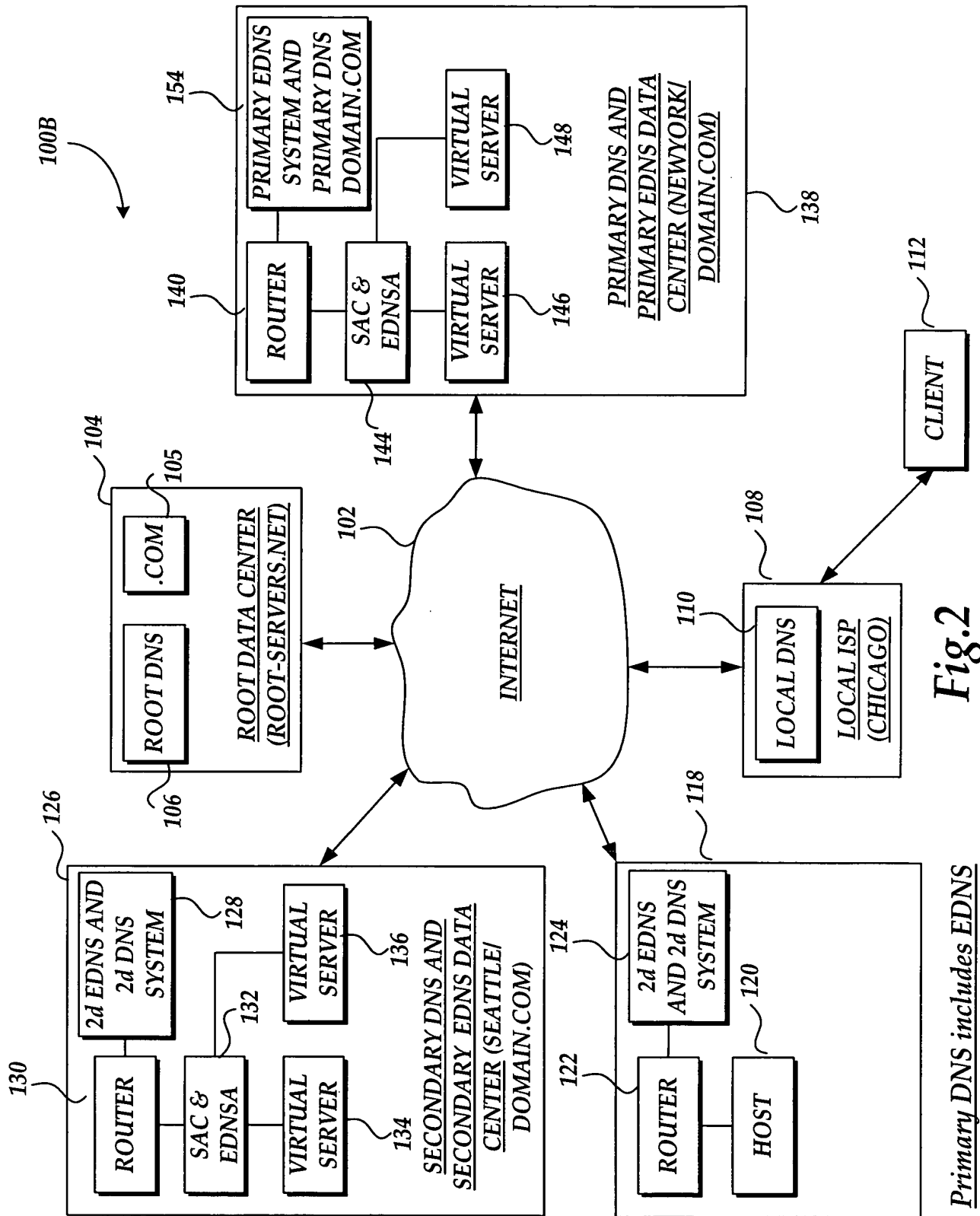


Fig.1

Separate Primary DNS and EDNS



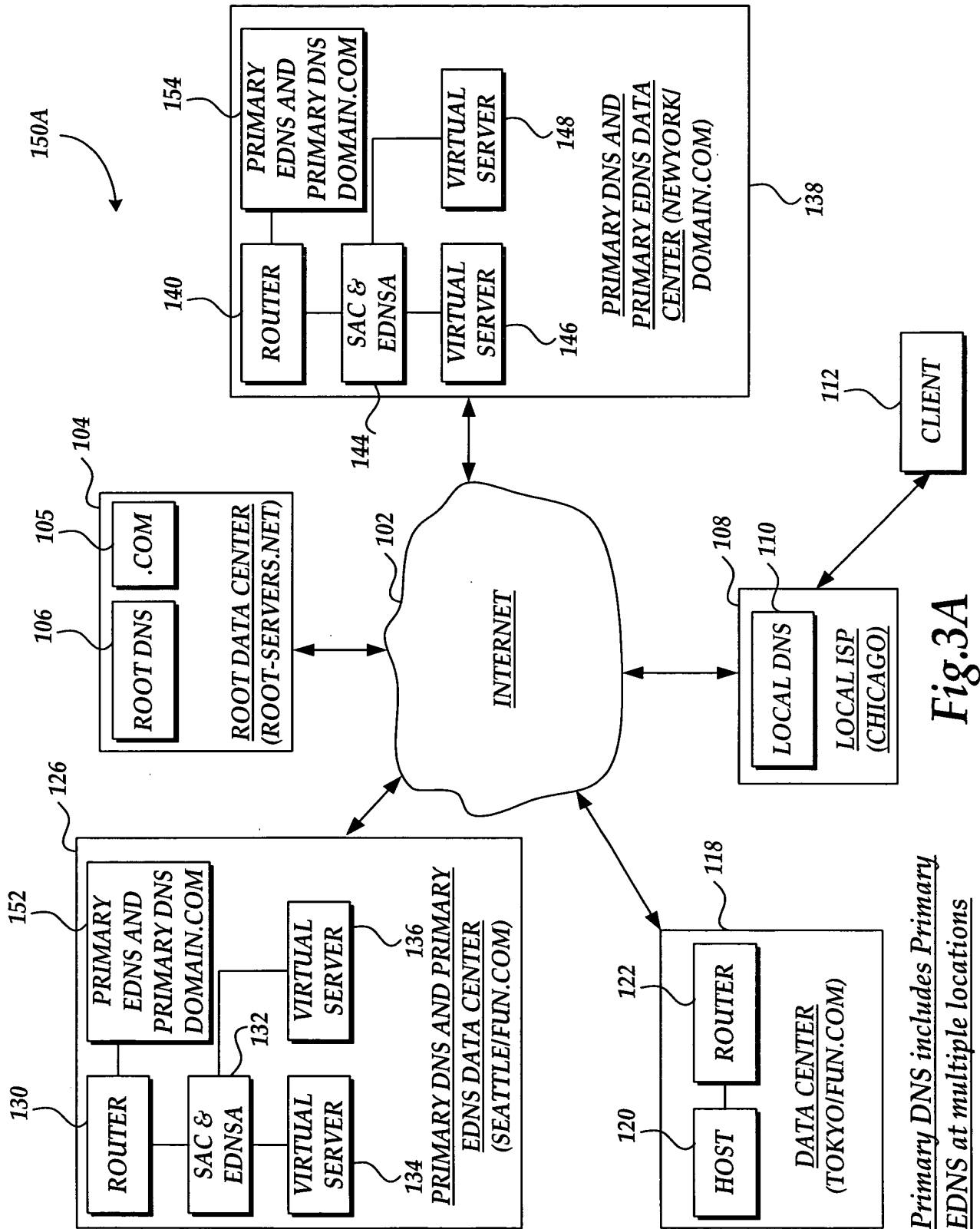
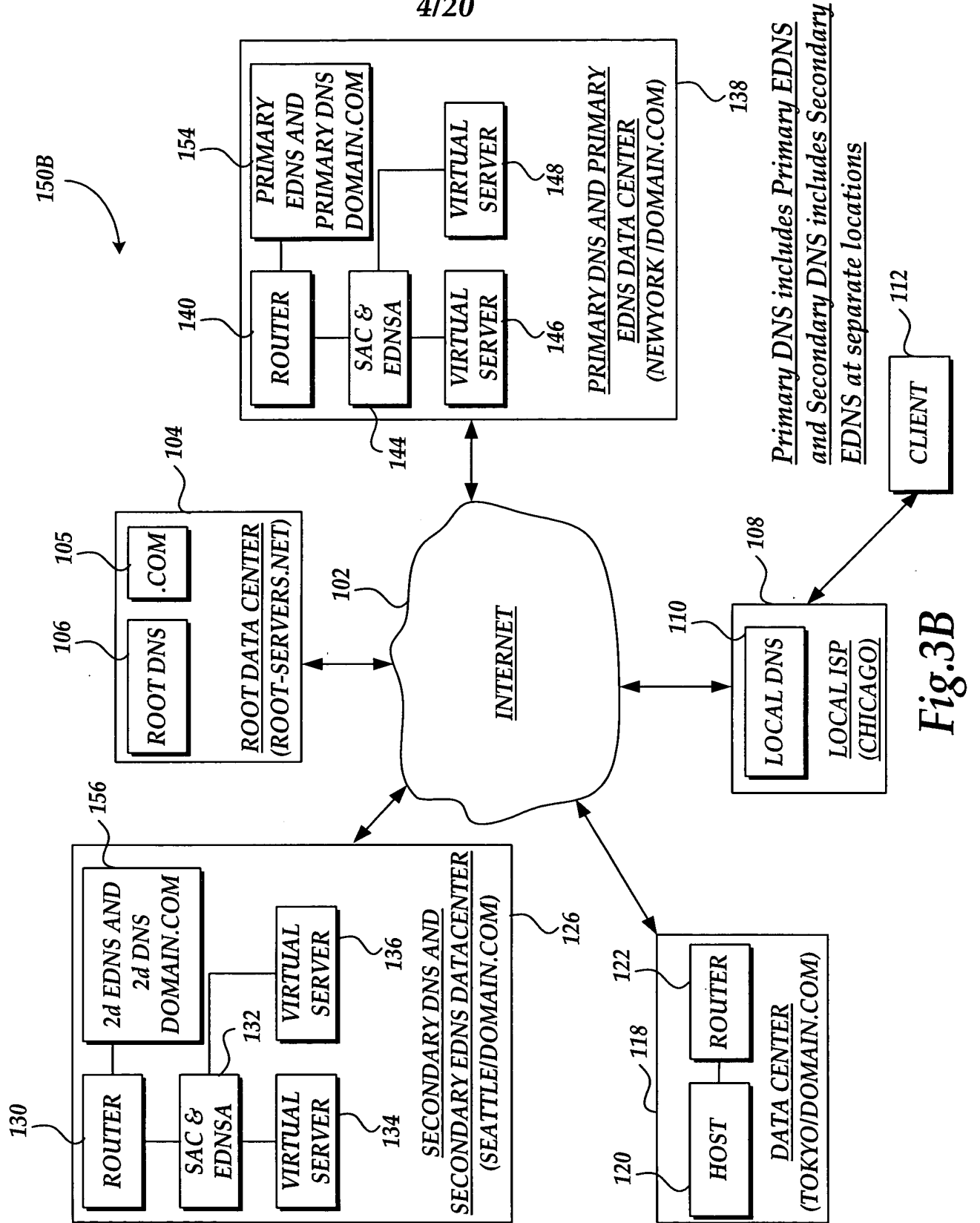
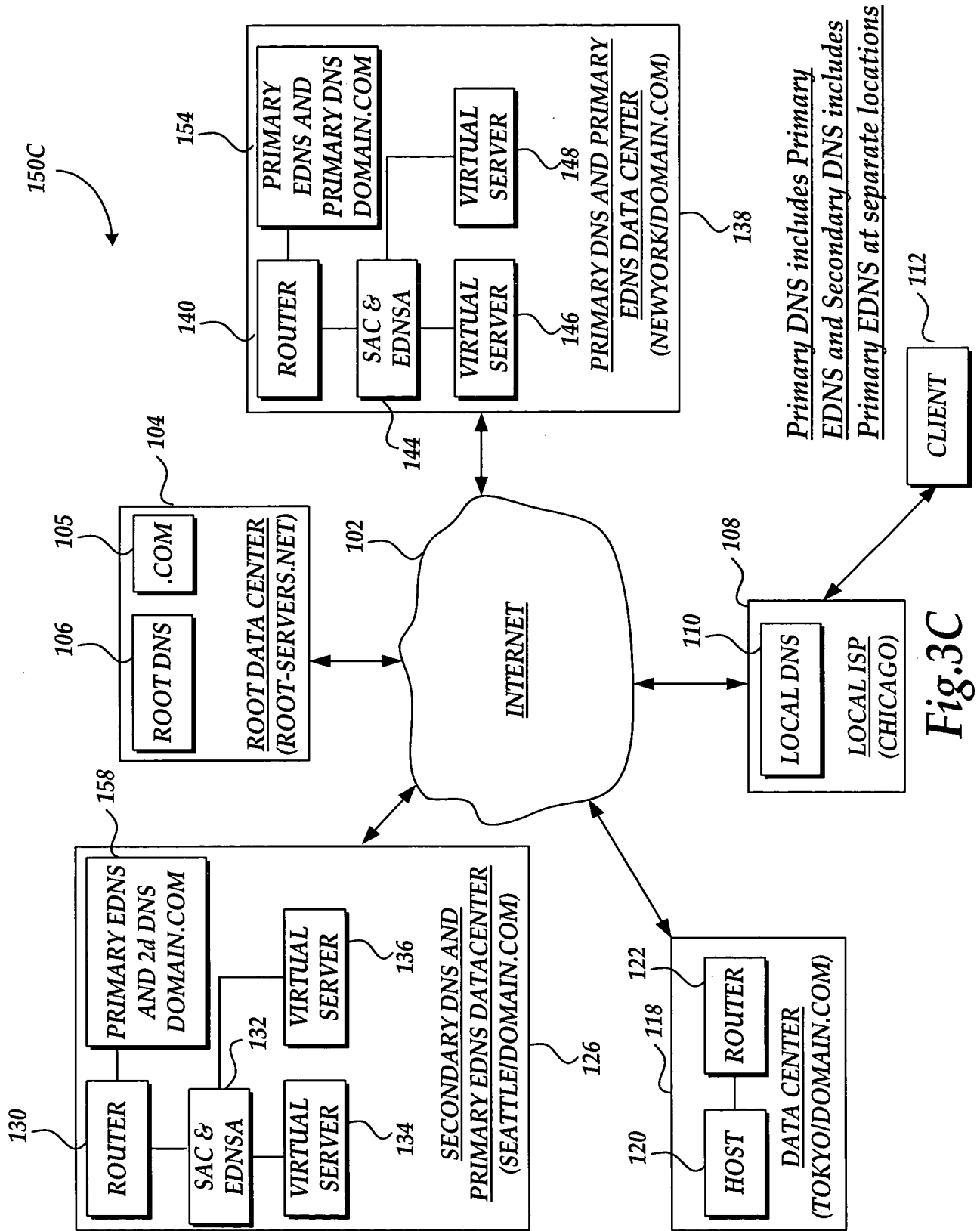
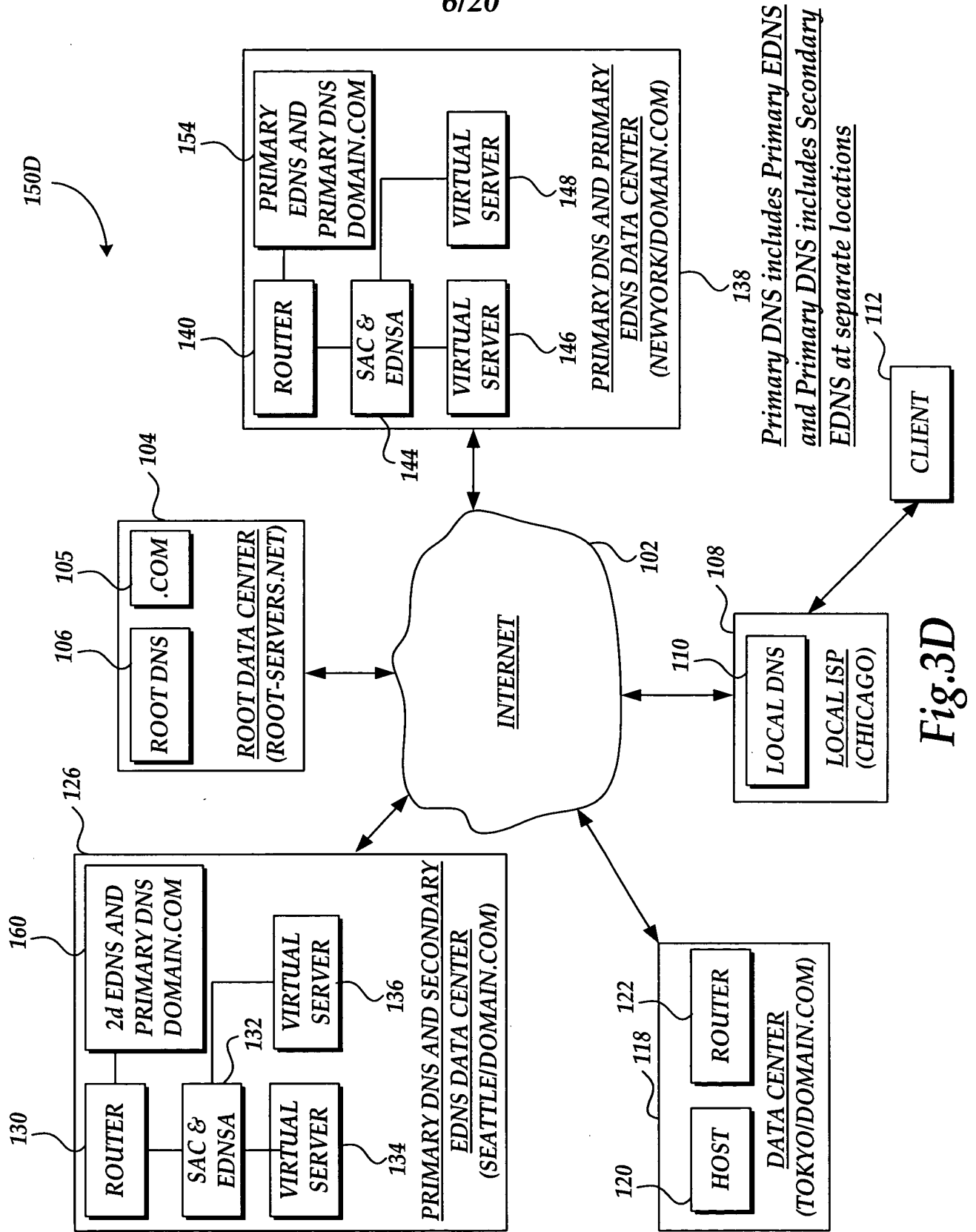


Fig.3A

Primary DNS includes Primary EDNS at multiple locations







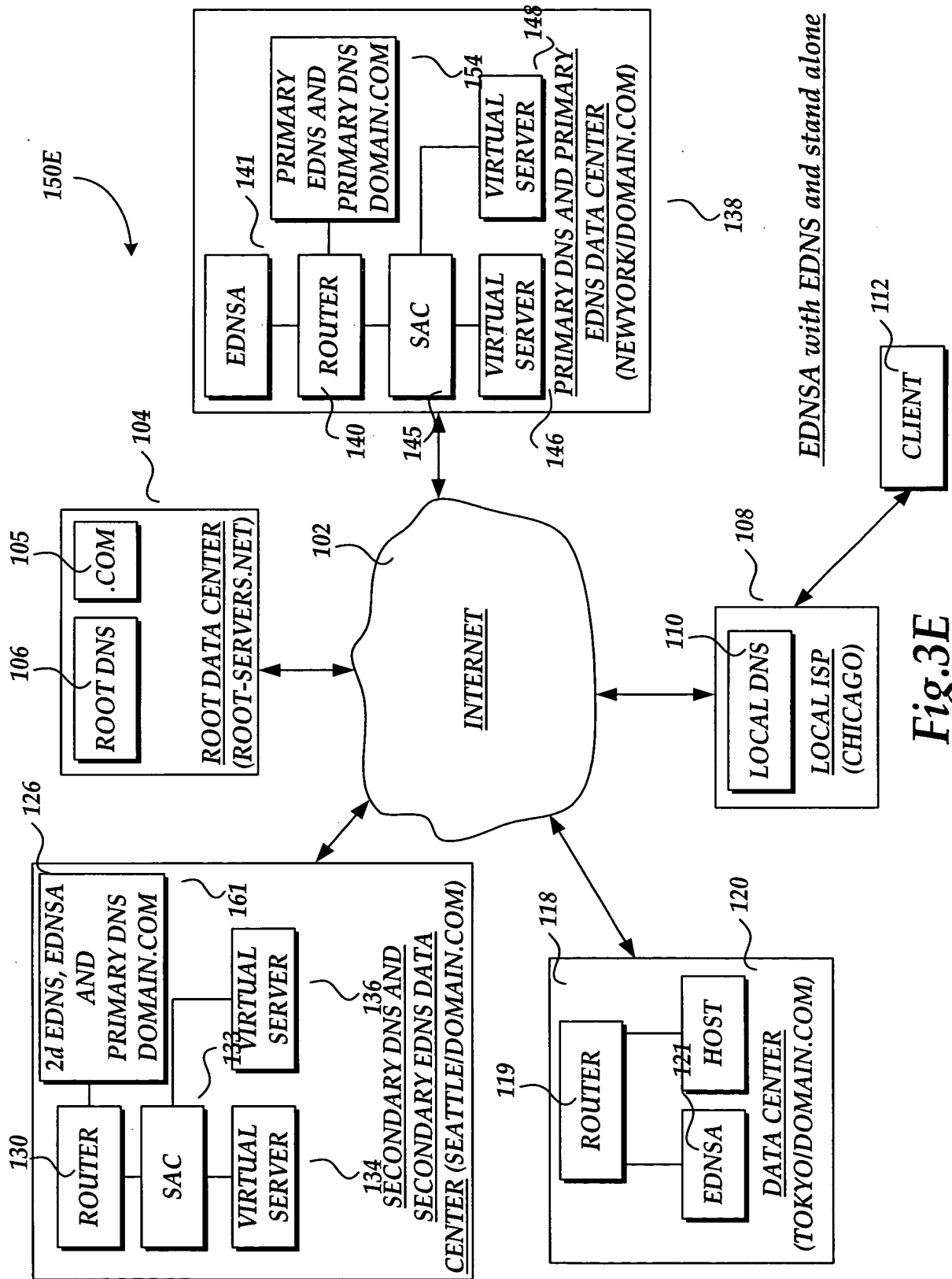


Fig.3E

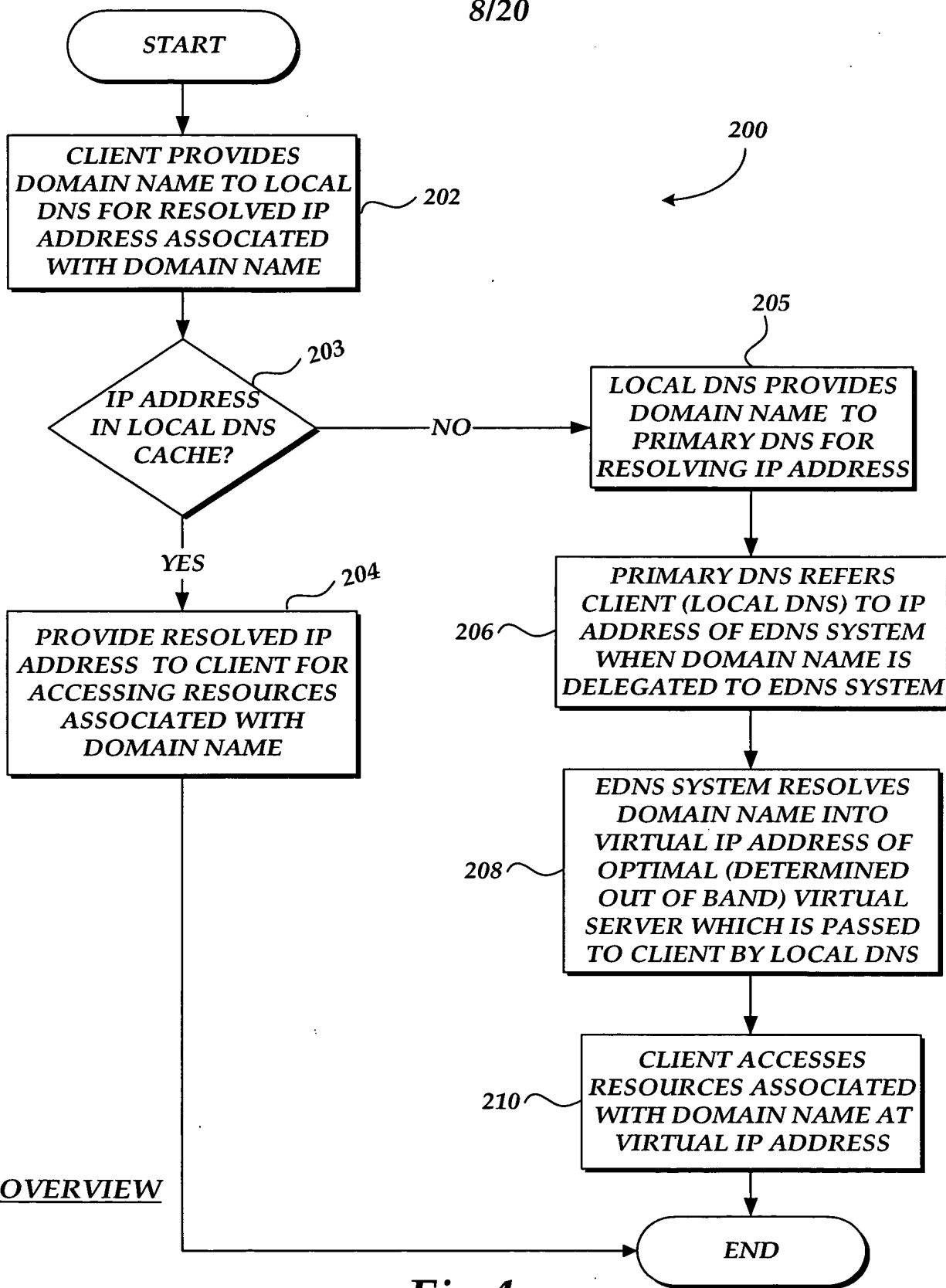
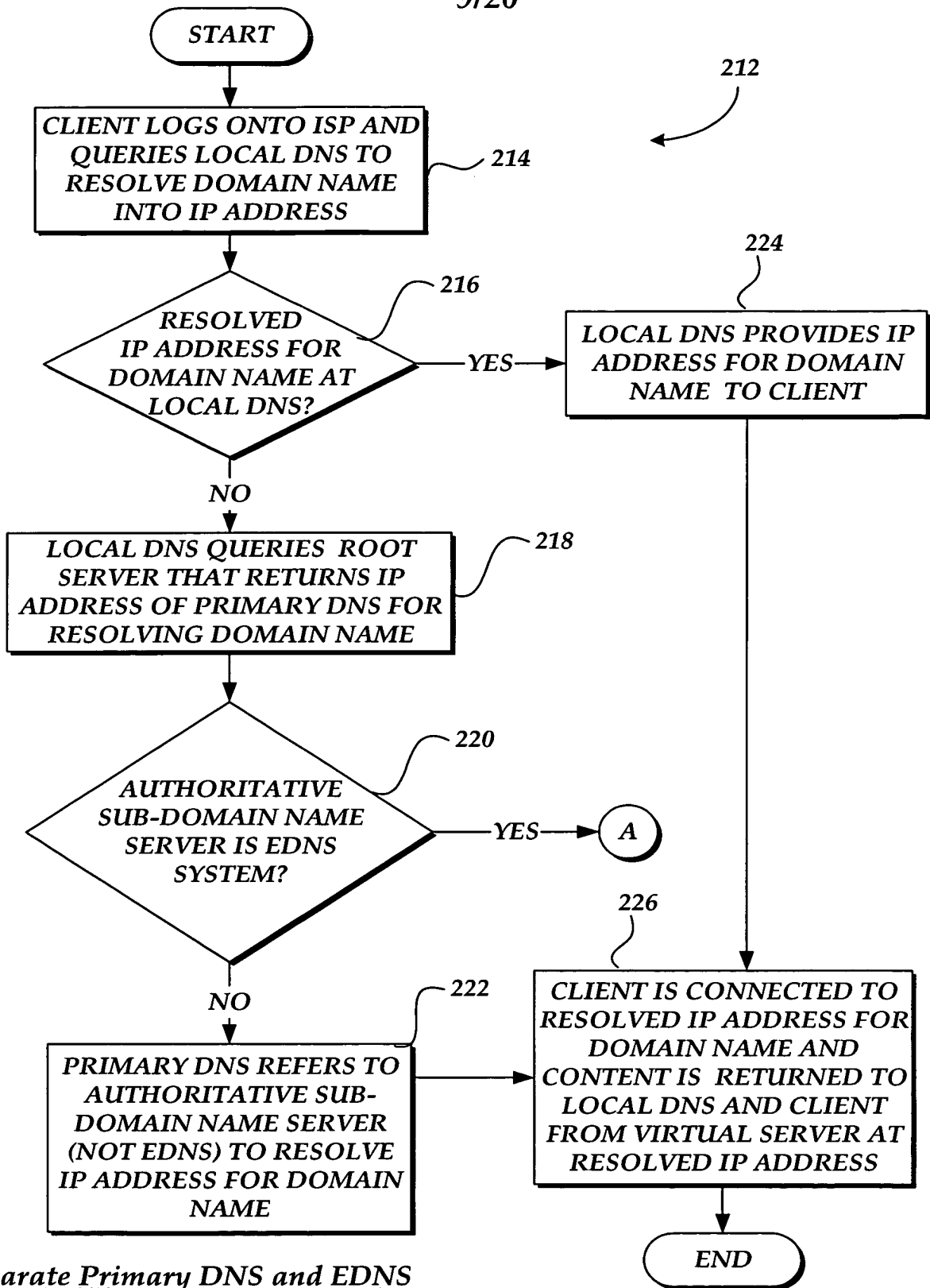
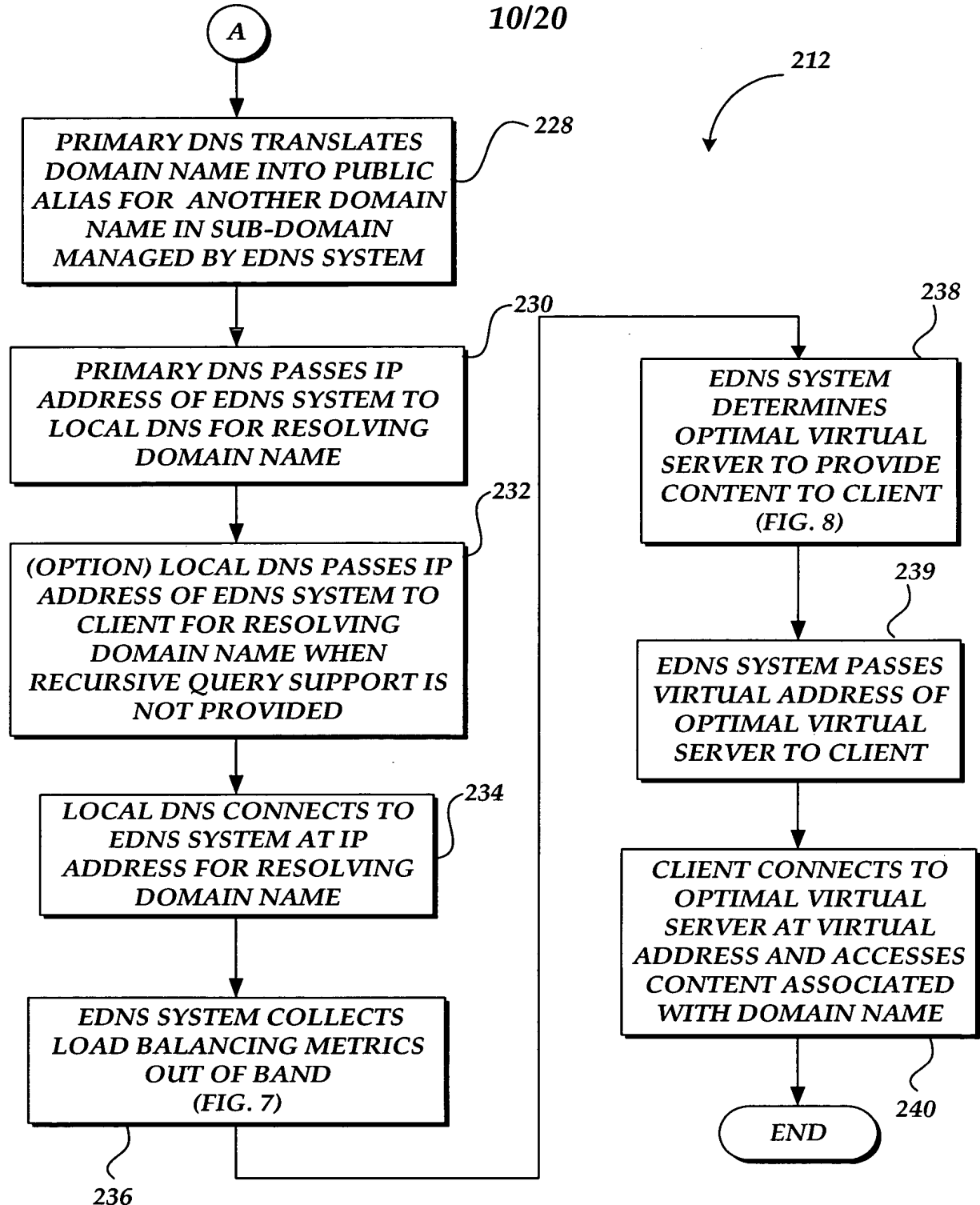


Fig.4



Separate Primary DNS and EDNS

Fig. 5A



Separate Primary DNS and EDNS

Fig. 5B

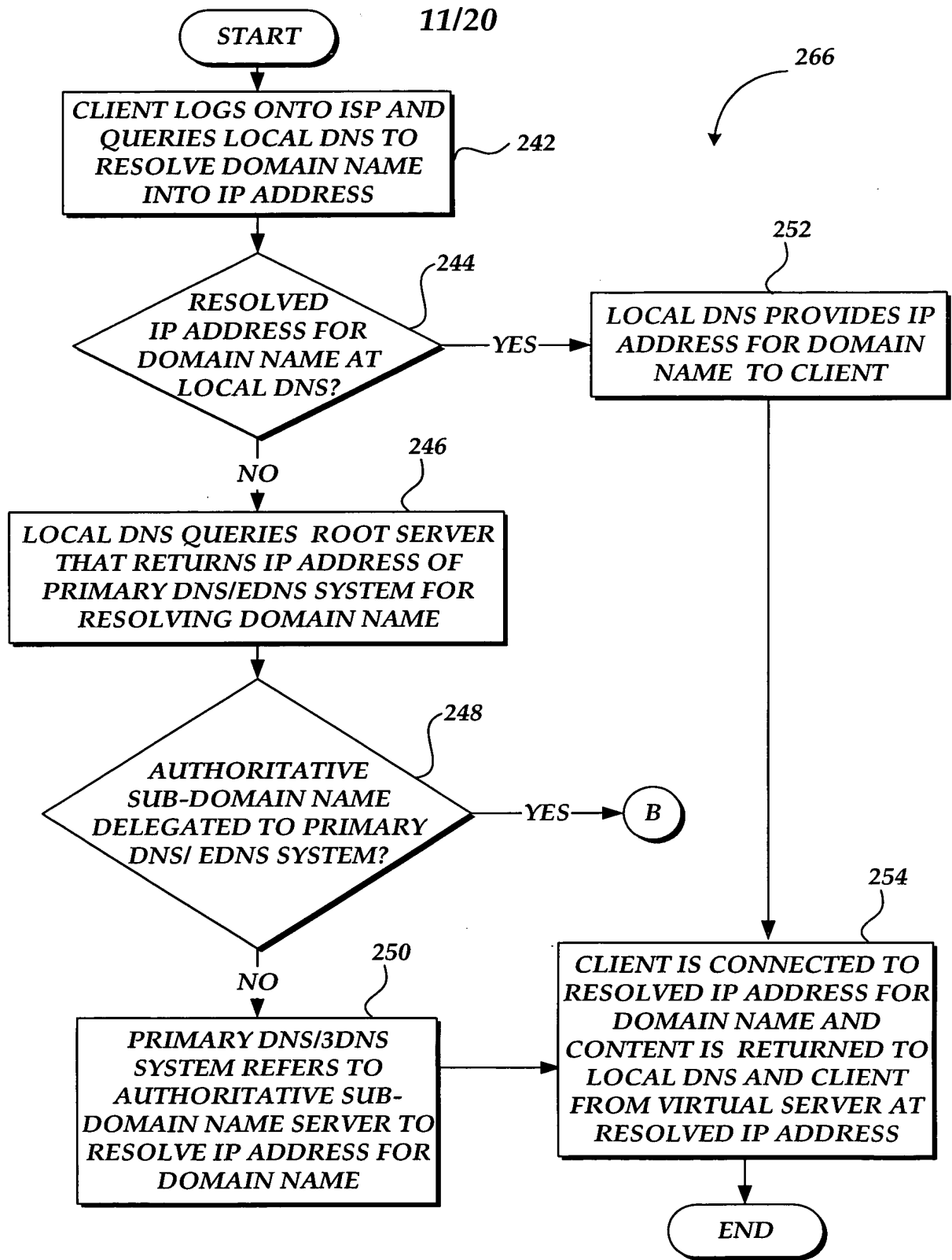


Fig.6A

Primary DNS includes 3DNS

B

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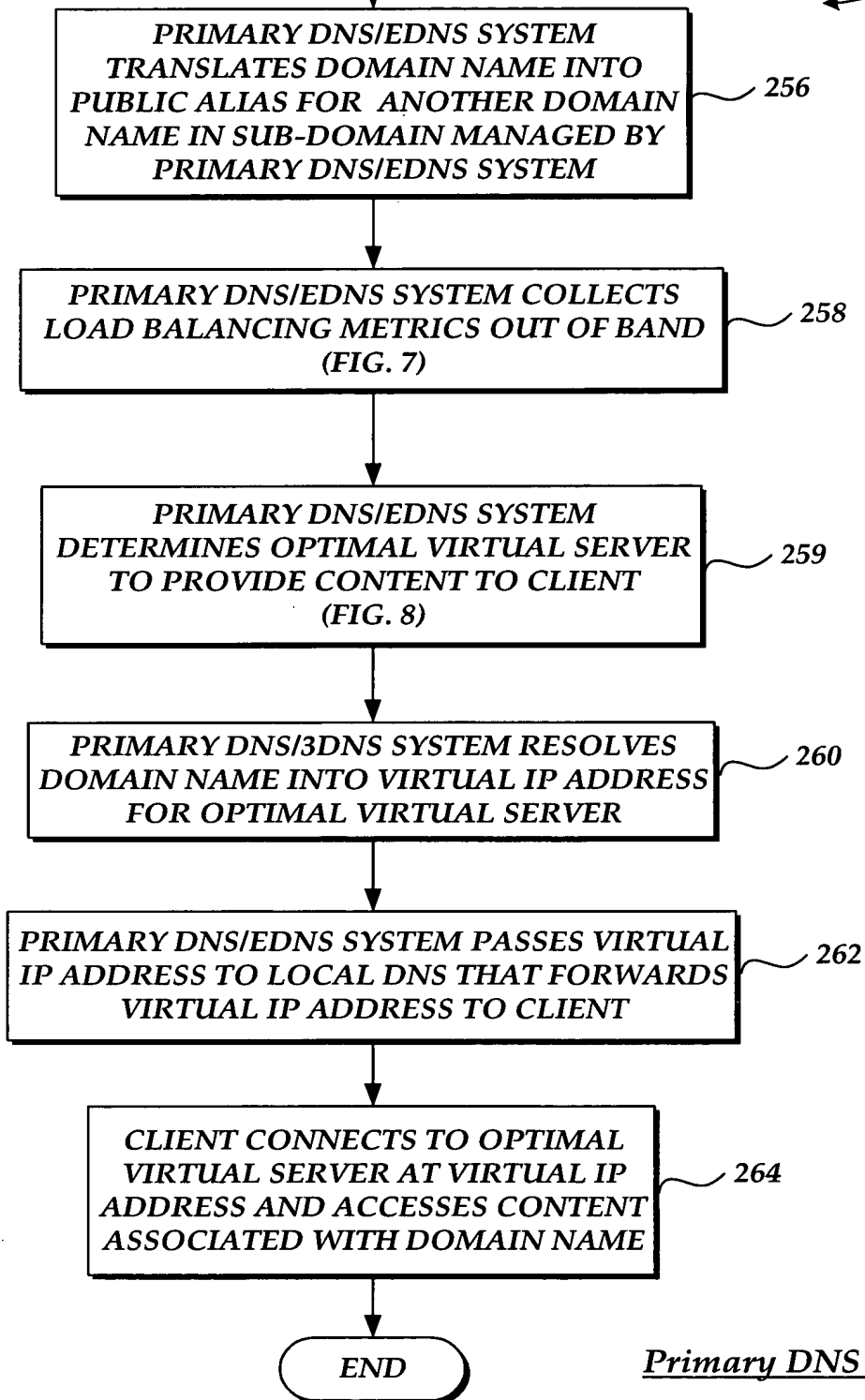
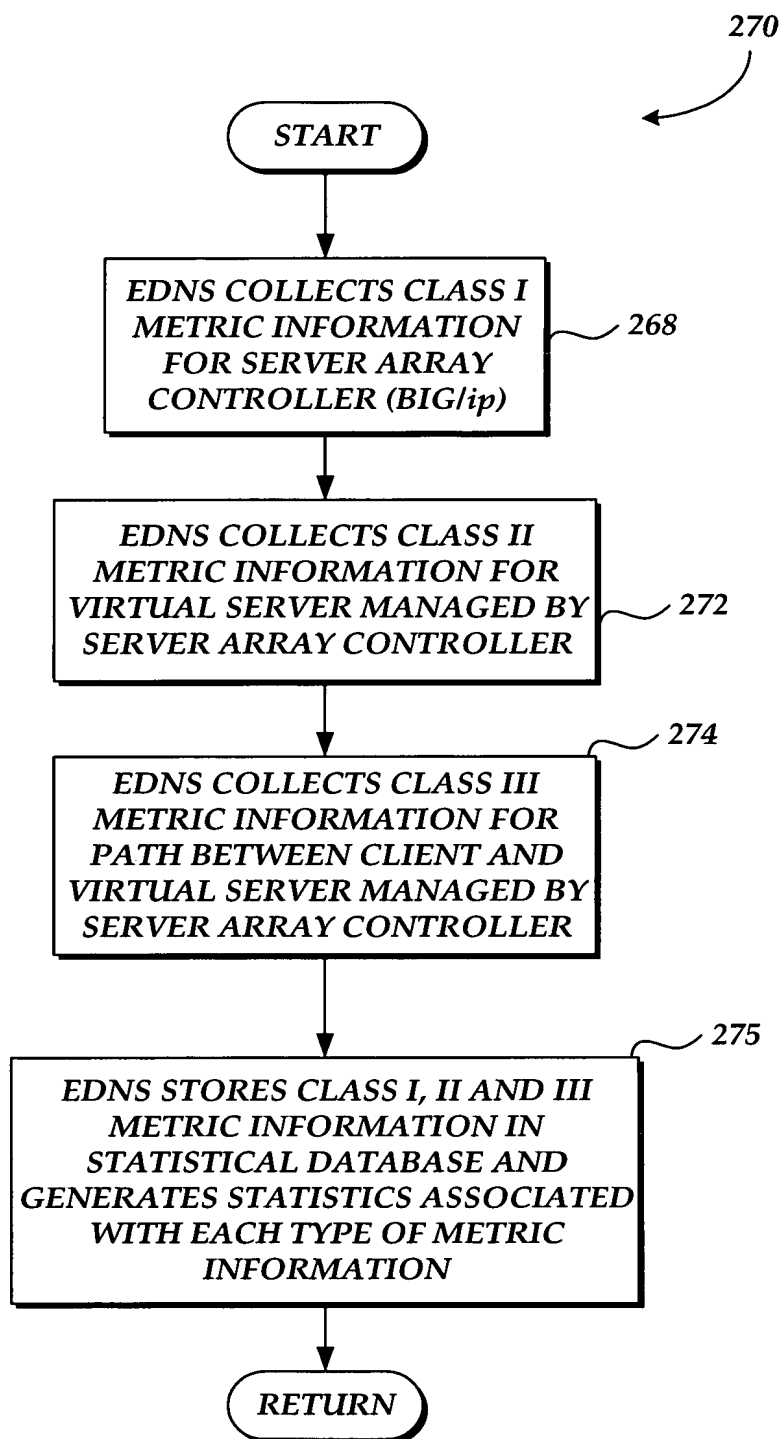


Fig. 6B

*Fig. 7*

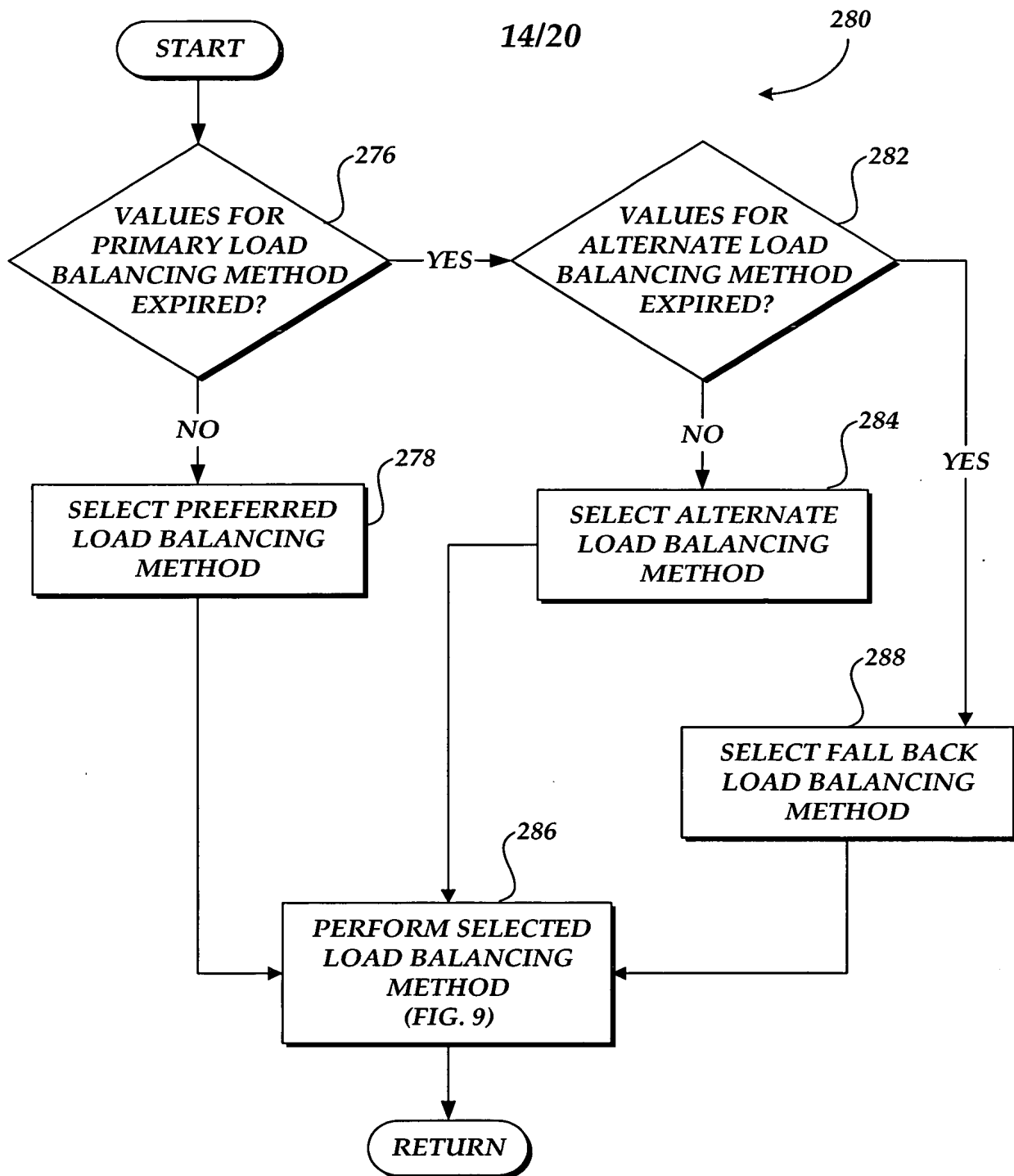


Fig. 8

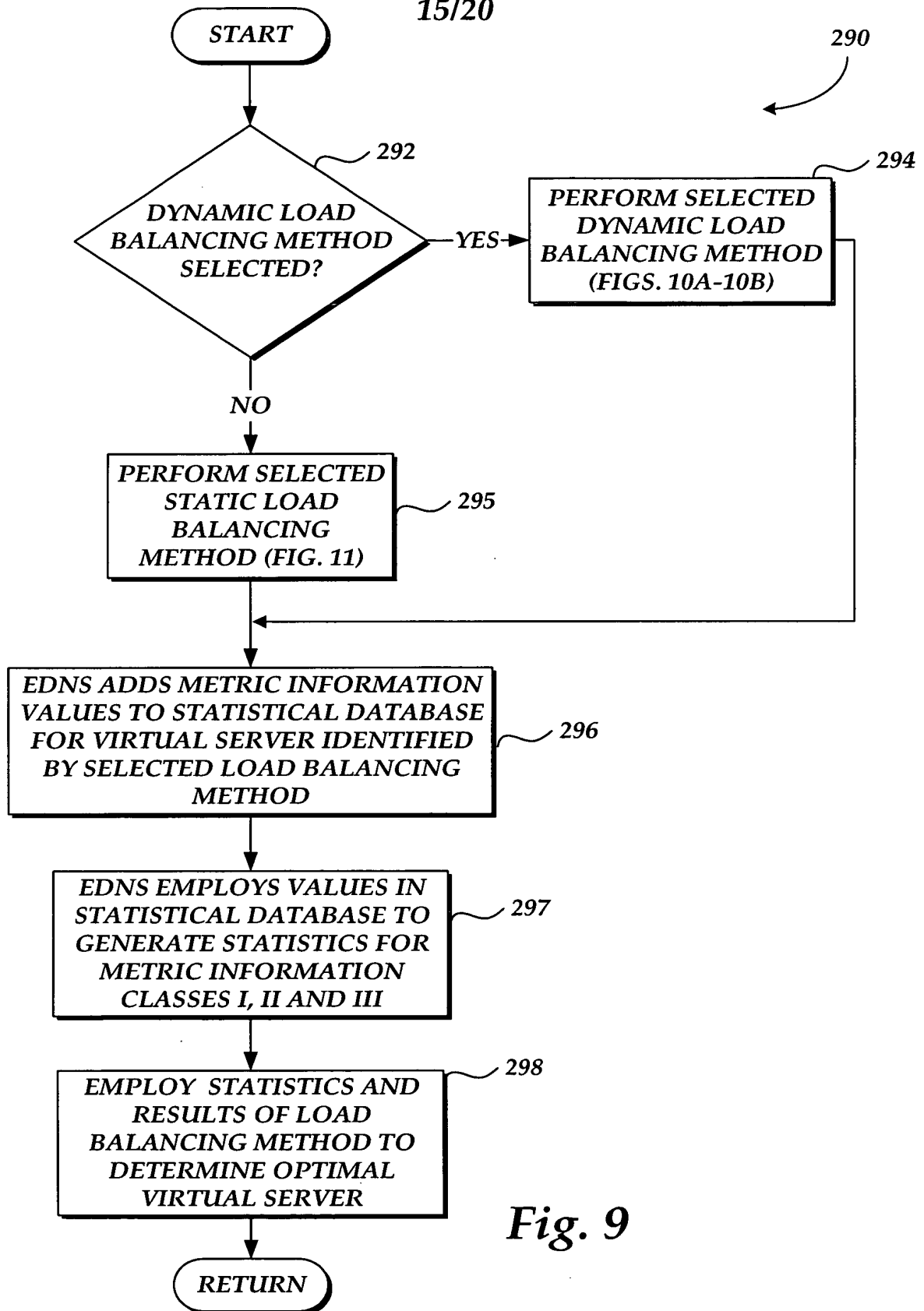
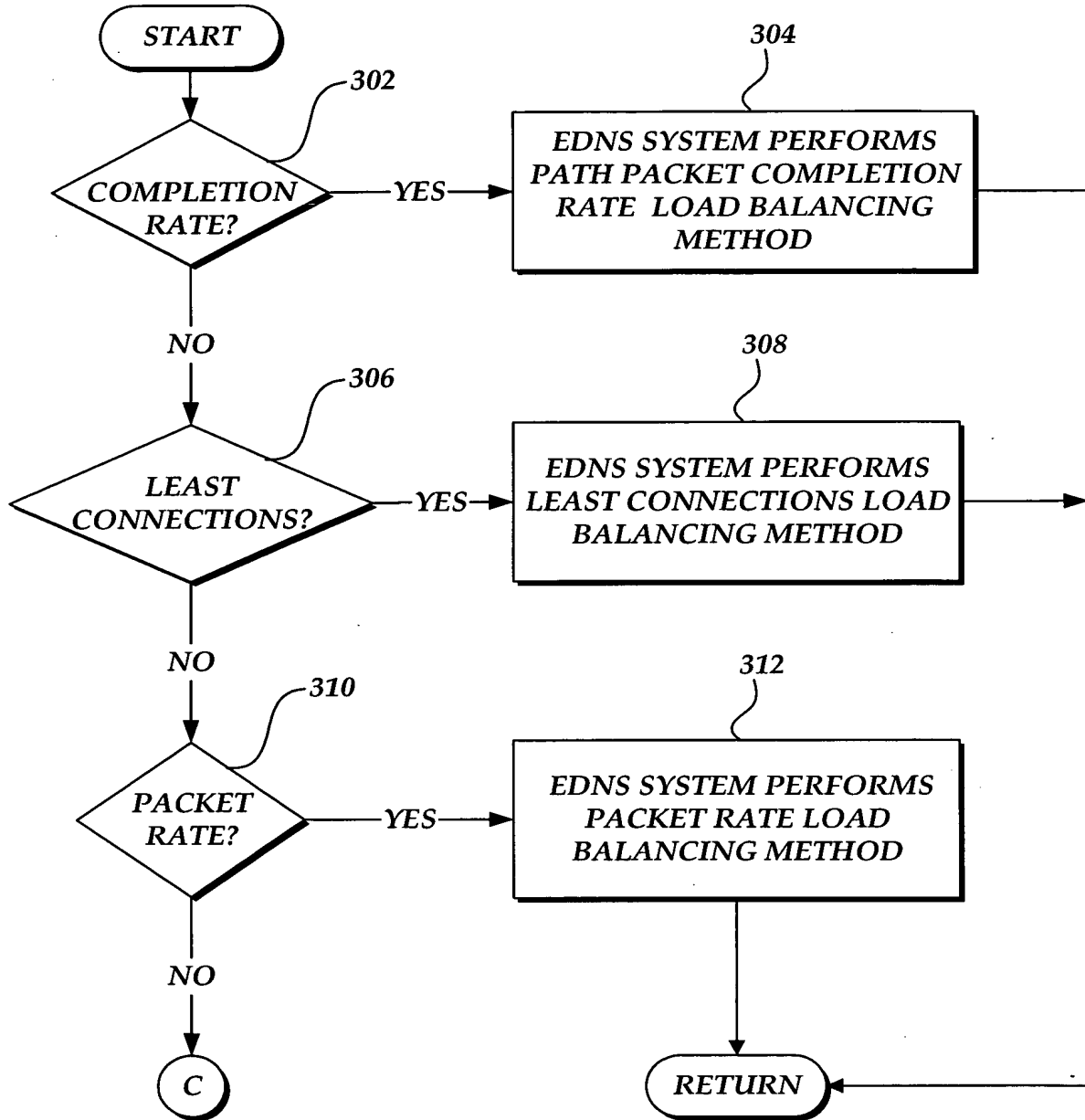


Fig. 9

*Fig. 10A*

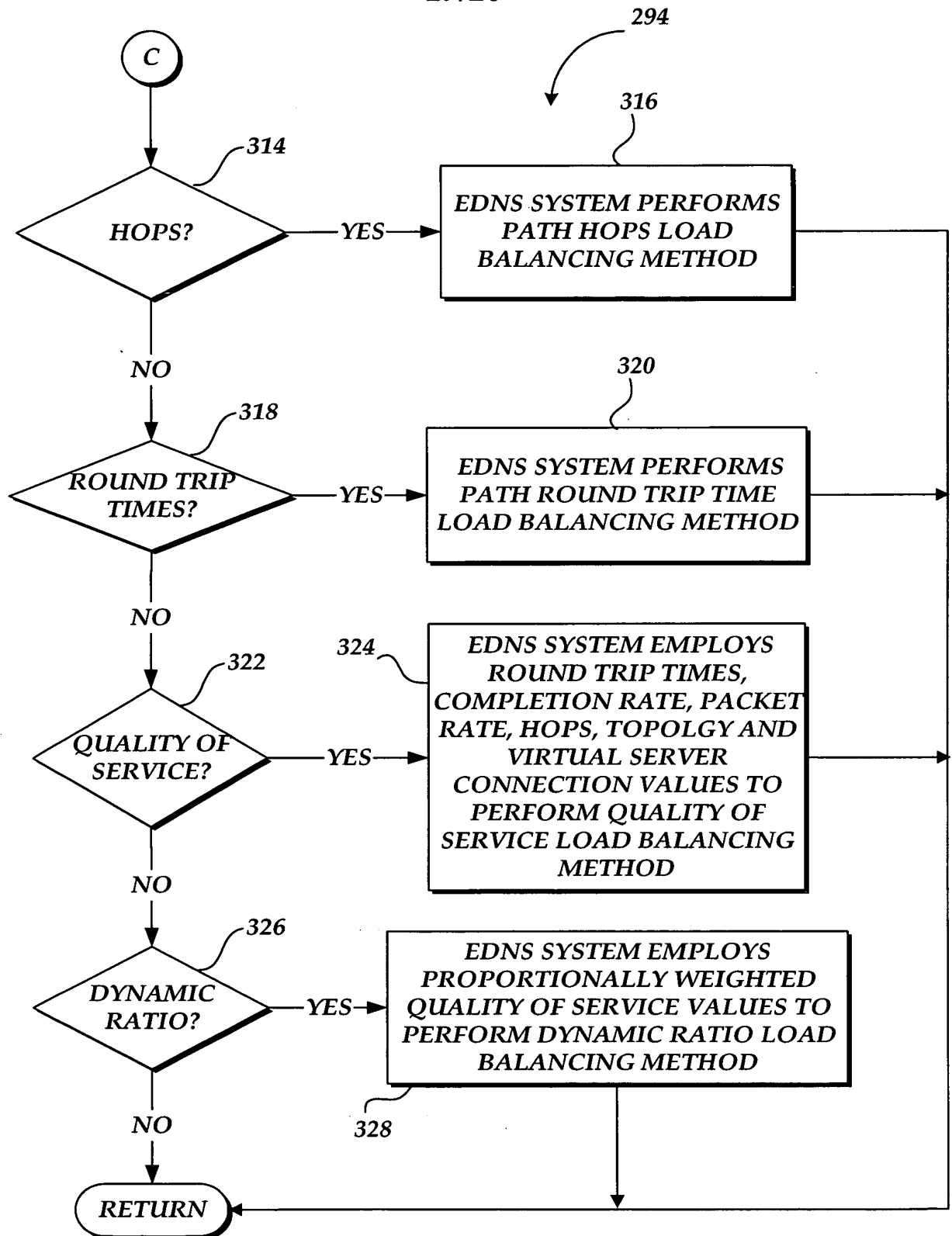


Fig. 10B

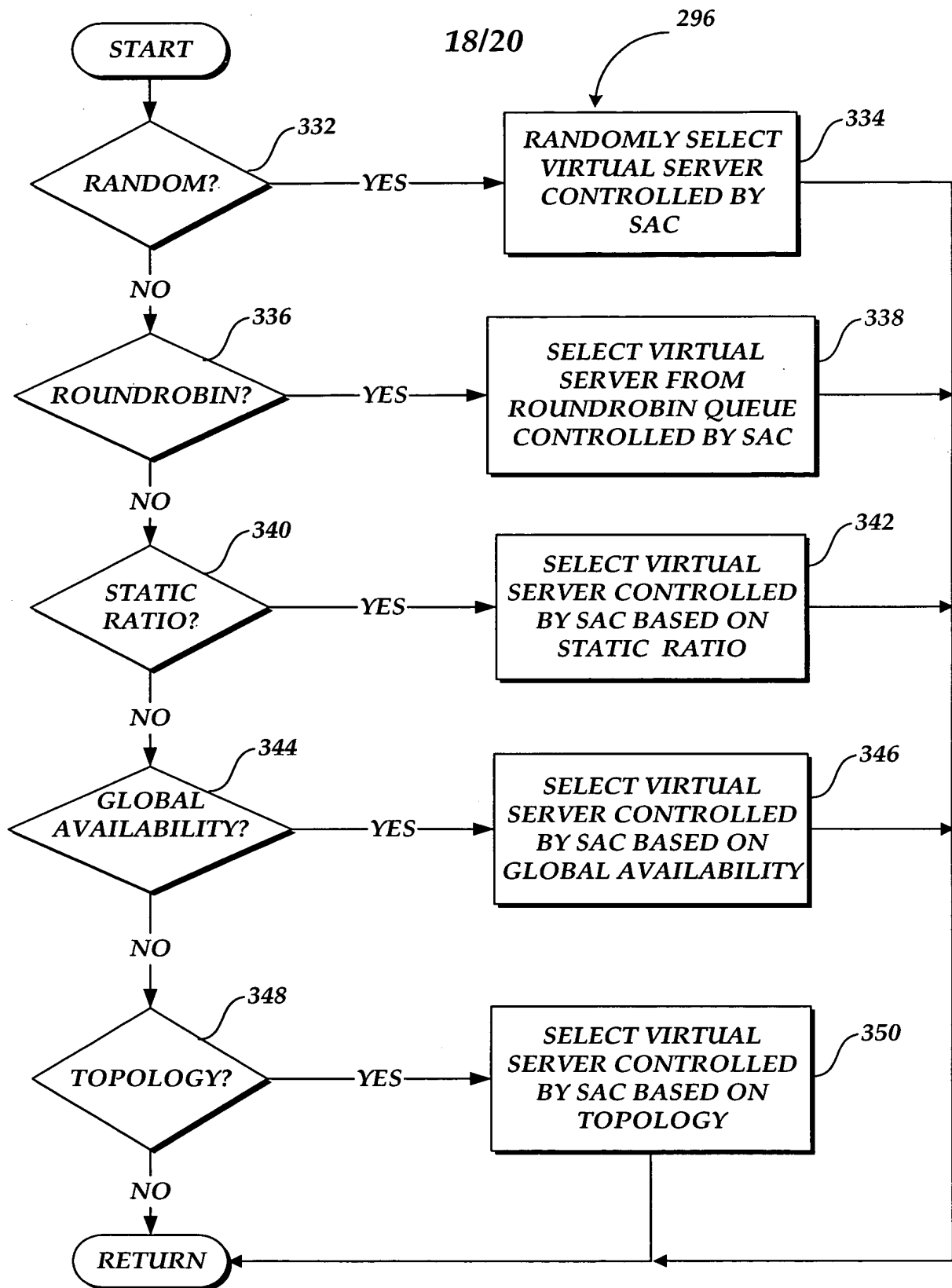
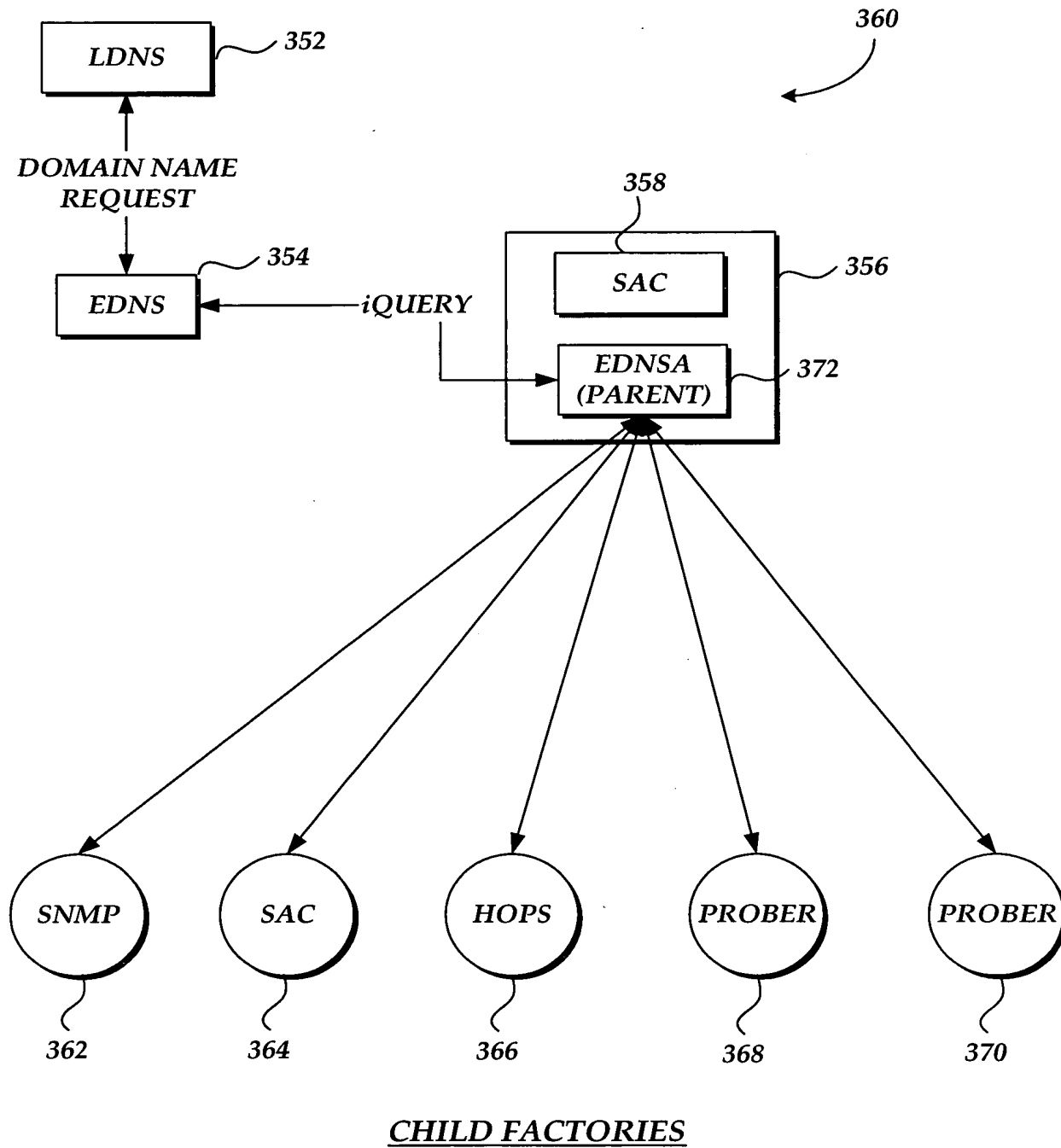


Fig. 11

**Fig.12**

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```

TOPOLOGY {
  ACL_THRESHOLD 1
  LIMIT_PROBES YES
  LONGEST_MATCH YES
  // SERVER/MASK (BIG/IP)          LDNS/MASK          SOURCE
  // NORTH AMERICA DOESN'T GO TO THE SOUTH AMERICA DATA CENTER
    200.107.34.0/24                198.0.0.0/8          0
    200.107.34.0/24                199.0.0.0/8          0
  // SOUTH AMERICA DOESN'T GO TO THE NORTH AMERICA DATA CENTER
    199.5.23.0/24                  200.0.0.0/8          0
    199.5.23.0/24                  201.0.0.0/8          0
}

```

Fig.13

```

TOPOLOGY SCORE {
  // SERVER/MASK (BIG/IP)          LDNS/MASK          SCORE
  /** NY Office **/
    /* NY Office --> NJ (high score) */
    209.67.0.0/16                  207.25.53.0/24      100
  /** Brazil **/
    /* Brazil --> Brazil (high score) */
    200.211.0.0/16                  200.255.0.0/16      100
    /* Brazil --> Argentina (low score) */
    63.65.0.0/16                    200.255.0.0/16      5
    /* Brazil --> New Jersey (low score) */
    209.67.0.0/16                    200.255.0.0/16      5
    /* Brazil --> New York (low score) */
    167.216.0.0/16                  200.255.0.0/16      5
}

```

Fig.14